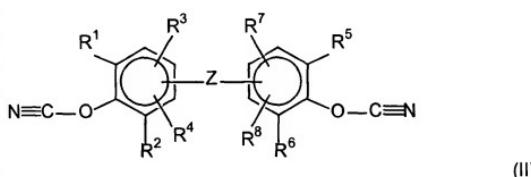


WHAT IS CLAIMED IS:

17. (New) An optical waveguide system or a structure or part thereof, comprising a resin composed of at least one polycyanate copolymer, obtainable by copolymerization of at least one difunctional cyanate of formula II:



wherein R¹ to R⁴ and R⁵ to R⁸ are independently from each other hydrogen, optionally substituted C₁-C₁₀ alkyl, C₃-C₈-cycloalkyl, C₁-C₁₀-alkoxy, halogen, phenyl or phenoxy, the alkyl or aryl groups being unfluorinated, partly fluorinated or fully fluorinated, Z is a chemical bond, SO₂, CF₂CH₂, CHF, CH(CH₃), isopropylene, hexafluoroisopropylene, n- or iso-C₁-C₁₀ alkylene, O, NR⁹, N=N, CH=CH, C(O)O, CH=N, CH=N-N=CH, alkyl oxyalkylene having 1 to 8 carbon atoms, S, Si(CH₃)₂, and R⁹ is hydrogen or C₁-C₁₀ alkyl

with at least one monocyanate of the following formula I:



wherein R is a straight or branched non-aromatic hydrocarbon radical or a non-aromatic hydrocarbon radical comprising a cyclic structure, the radical having the formula C(R')₂-CFR''₂ wherein each R' is, independently from the other, hydrogen or fluorine or an

10019447-2 050602

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

AUGUST 2005

optionally substituted alkyl or alkenyl group, and each of R" may independently be defined as R' or may have an arylc structure.

18. (New) An optical waveguide system or a structure or part thereof according to claim 17, wherein the substituted alkyl or alkenyl group of R' is fluorinated.

19. (New) An optical waveguide system or a structure or part thereof according to claim 17, wherein the polycyanate copolymer is obtainable by copolymerization of at least one difunctional cyanate of formula II, at least one monofunctional cyanate of formula I and at least one dicyanate having formula III:



wherein R¹⁰ is a non-aromatic hydrocarbon group carrying at least one fluorine atom.

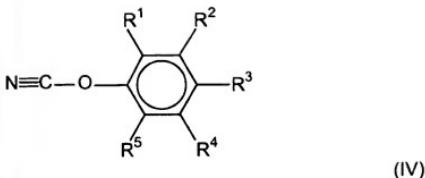
20. (New) An optical waveguide system or a structure or part thereof according to claim 19, wherein R¹⁰ of formula III is a partly or fully fluorinated alkylene group having 1 to 15 carbon atoms.

21. (New) An optical waveguide system or a structure or part thereof according to claim 20, wherein the partly or fully fluorinated alkylene group has 3 to 12 carbon atoms.

22. (New) An optical waveguide system or a structure or part thereof according to claim 19, wherein the polycyanate copolymer is obtainable by copolymerization of at least one difunctional cyanate of formula II, at least one monofunctional cyanate of formula I, optionally at least one dicyanate having formula III, and a monocyanate of formula IV

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com



wherein R¹ to R⁵ are defined as in formula II.

- A²*
2010050 = 2010050
23. (New) An optical waveguide system or a structure or part thereof according to claim 19, wherein the polycyanate copolymer is obtainable by copolymerization of at least one difunctional cyanate of formula II, at least one monofunctional cyanate of formula I, and at least one brominated monocyanate of formulas I to III, as defined above with the proviso that the monocyanates of formula I may be free of fluorine.
24. (New) An optical waveguide system or a structure or part thereof according to claim 23, wherein the at least one brominated monocyanate is of formula I as defined above with the proviso that the monocyanates of formula I may be free of fluorine.
25. (New) An optical waveguide system or a structure or part thereof according to claim 17, wherein the monocyanate of formula I is used in an amount of at least 10% by mol per mol of the polycyanate copolymer.
26. (New) An optical waveguide system or a structure or part thereof according to claim 17, wherein the monocyanate of formula I is used in an amount of at least 20% by mol per mol of the polycyanate copolymer.
27. (New) An optical waveguide or a structure or part thereof according to claim 17, wherein the polycyanate copolymer has a glass transition temperature of from 100°C to 300°C or a refractive index of about 1.35 to about 1.60 at 1.55μm or a glass transition

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com